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ADULT EDUCATION

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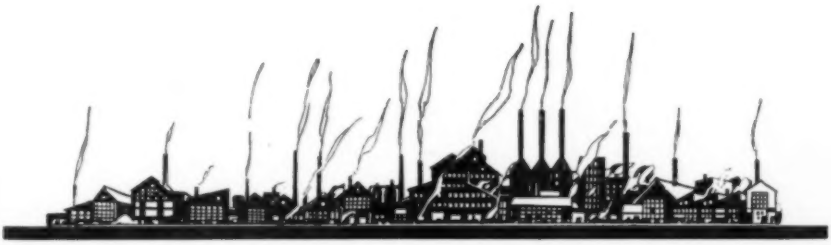
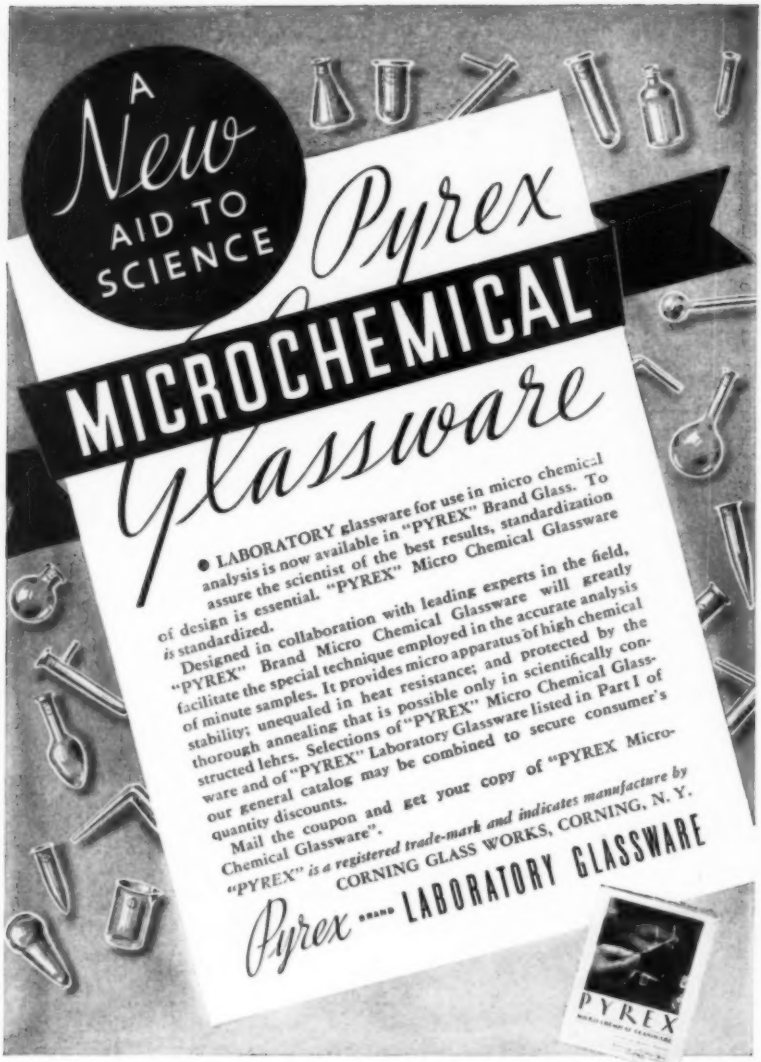
TEACHING SCIENCE IN SECONDARY SCHOOLS

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V. F. KIMBALL, *Editor*, 233 Broadway, New York City

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On a Modified Meth. for Decomp. Alum. Silicates—Finn & Klekotka—Bur. Stds. Research Paper No. 188.

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EDITORIAL

EDITORIALS BY COUNCILORS

I

Looking Ahead

By M. L. Crossley, F.A.I.C.

An inspiring message from the President of the Institute.

THE rôle of a prophet is not easy. There are no sure signs to be found in the experiences of the past to guide him in predicting the future. He must depend upon his judgment of the value to be assigned to the average results of human activities, relations, and aspirations. His judgment is no better than the evidence will permit. The facts of experience are colorless and meaningless unless correlated properly. To collect facts is always easier than to correlate and interpret them.

In so far as we are able to judge from present evidence the challenge to the chemist is to fight to meet the future needs of social growth and economic progress. The mistakes and accomplishments of the past are behind us. There is no gain in dragging along the highway of progress a trailer loaded with the cast-offs of yesterday. Sufficient unto the tasks of tomorrow are the tools of today which embody only the best of Life's experiences down the trail of civilization. We are artists forever painting pictures which are never completed. Each

day we see a new picture on the canvas. When we become satisfied with our creations and refuse to change them we are ready for the undertaker.

The past accomplishments of the chemist are but a prelude to what is expected of him in the future. No avenues of service are closed to him. The science and art of his profession connects the sinews of Life at many points. The important question for the future is: How strong will these connections be?

The answer to this question lies in the imagination, vision, initiative, and courage of the chemist. The problems are many. Will he take the trouble to look ahead and see them? Can he resist the temptation to fall into the habit of doing only what is popular and fashionable in chemistry? Not all of the worthwhile things to be accomplished are capable of popular appeal. Some of the most important problems to be solved are connected with the old and familiar experiences. Sanitation, health, transportation, and communication invite the attention of the best the chemist has to offer in intelligent service. The pollution of potable streams and tidal waters demand attention. The basic facts of metabolism open up possibilities of unravelling the underlying mechanism of the regulatory functions of the human body and of safeguarding health. With the structure and properties of the hormones known, it should be possible to discover simple means of detecting their presence in the excretory products or in the systemic fluids of the body. Who will be the discoverer of a simple color reaction for the female sex hormones in the urine? The complex web of infection and immunization will be untangled. The chemist has an important part to play in the work. The evil of wanton slaughter of human beings on the automobile highways calls for a sane and effective remedy. The chemist will contribute greatly to the solution of this problem. He will find out what colors and lights cause the least fatigue of nerves and muscles under the strain of driving and he will find a means of using them in the construction of a safe highway system. The chemist will also find need for his training and experience in the solution of the problems involved in the development of the future systems of communication. The things that are now luxuries will become necessities. Every house will be air-conditioned, summer and winter. The chemist must discover cheap, efficient cooling agents to make this realizable. The devestating heat of the tropics will be tempered to make the conditions of life more endurable for many and on the whole more fruitful for all mankind.

These opportunities impose an obligation on the chemist to see the economic aspects of the problems he faces. He can be instru-

(*Please turn to page 302*)

Adult Education with Reference to the Chemist

William L. Hyden, F.A.I.C., and Howard W. Post, F.A.I.C.

Presented by the authors at a recent meeting of the Niagara Chapter of the Institute.

THE thought has been expressed frequently that a chemist is put in a somewhat difficult position in his relation to normal society. By the requirements of his profession, he is necessarily a person of highly specialized training. This training is expressed in language and symbols not ordinarily used by laymen or individuals not in scientific circles. His communication with those outside his field with whom he comes in contact requires a translation, so to speak, in order to explain intelligently his ideas and accomplishments. The result is that a chemist must study means of expression to live the fullest and most helpful life. This additional requirement is not to be viewed as a detriment, but rather to be embraced as a genuine opportunity and challenge for broadening one's self. The result has been that many of our leading and best chemists have been men of wide vision and understanding.

Only in rare instances are great achievements made by recluses and hermits. Such contributions as have been made by these extremely retiring individuals have been in the early times and in periods long since past. Today the chemist must be socially minded and well rounded to be really effective. It behooves him, therefore, to study well cultural subjects and to appreciate properly the points of view of his associates. The extension of the valuable things that make for better living, for which the chemist is primarily responsible, must be put into operation by contact with others.

But we would not stress the education of the chemist on social and cultural lines to the exclusion or detriment of his fundamental and basic education in his own field. If this is done, he might become like the home owner who pays so much attention to the maintenance and redecorating of the interior of his home that he has no money, energy, or time left to be sure that the foundations are not deteriorating. Some

time he may find that corrosion and termites have wreaked such havoc with the foundations that his house is no longer livable.

The chemist should spend a large portion of his individual time in keeping up with the chemical literature, attending seminars held by our universities and societies of chemists, and he should by all means review and bring up to date his ideas on various basic principles of chemistry which he has studied. If properly planned for, such work can be done with profit and pleasure. Suggested lines include:

1. The occasional perusal of textbooks, monographs, and other books which have been carefully read and marked in earlier days and the addition to these of the newer thoughts which have been expressed in later publications and in the national meetings of the chemical societies.
2. The formation of small groups of friends working in allied fields to discuss definite topics and current publications at specified times.
3. Attendance upon and participation in meetings of the American Chemical Society and the American Institute of Chemists.
4. Cultivating the acquaintance of scientific men not working primarily in chemistry.

Such activities are bound to lead to stimulating thoughts which will be reflected in better achievements. As far as our own immediate Niagara Chapter of the A. I. C. is concerned, we may divide its personnel into two general groups: *first*, industrial chemists and those connected with the chemical industry; and *second*, academic chemists. The problems confronting the adult education in both groups are approximately the same. Those of us in industrial work may feel that our job is a bit more difficult because we are so often pressed for quick results on important developments by executives not trained in science and who do not always realize the scope of work that may be completed in a limited time. We sometimes feel, therefore, that the academic man has a more appreciative, leisurely, and understanding atmosphere in which to work. Upon further consideration, however, we conclude that we are all confronted with difficulties of about the same magnitude.

THOSE of us who are engaged in teaching have, as mentioned above, much the same fundamental desires and urgings of the spirit as have the industrial chemists. A college professor has ample time to read. In fact, one of the first (but by no means the last) requirements of a successful college professor is that he keep up with the literature in his field. But here his real problem begins. What is he

to do with the remaining time at his disposal? As a certain college president remarked in substance, not long ago, a scholarship which does not produce is sterile. And what organization, whether university or commercial laboratory, is interested in sterile scholarship—the scholarship that takes but does not give? The problem of the university faculty man is how to use his "spare" time to the fullest advantage both to himself and to the profession at large. He must go forward or he will go backward. There can be no "stationary state" as far as he is concerned any more than there can be such a "stationary state" for the industrial chemist.

Then there is the matter of the correlation of these two fields of endeavor. In the fore part of this article considerable emphasis has been placed on the difficulties confronting the average industrial chemist in his attempts to improve his general and theoretical knowledge of his chosen profession. An equal and opposite danger often confronts the university professor. Many of us are quite well acquainted with the type of intellectual man who is concerned so completely with theories and with speculation that his head is almost literally in the clouds. In this unfortunate condition only a miracle could effect any sort of contact between his feet and the ground. The education of the rising generation of chemists is of vital importance both to themselves and to the profession at large and should not be too dominated by theory and speculation to the exclusion of everything else, even though a well-rounded, thorough-going, general, and theoretical training is of course the best preparation for any future career in chemistry. What we mean is that the well-rounded university professor should have certain industrial contacts which will enable him to preserve that intellectual balance between theory and practice without which a man is always lop-sided whether he be teacher or industrialist.

AS means to this end we can only repeat what has been suggested before. Ample opportunity should be offered industrial chemists to appear before groups of students. The talks will be more inspirational than technical although some may be rather informative touching on the organization of an industrial laboratory, etc. Seminars under joint industrial-university management can be made of inestimable value if properly conducted. The material discussed should be of as theoretical a nature as possible for the benefit of the industrial group but the discussions should be free and unhampered by too many influences which might inhibit contributions relative to the more practical aspects of a given problem.

The challenge of adult education is one that confronts all of us and if we can get into our consciousness the conception of what adult education can mean, we shall have accomplished much. We should not relegate to the period of youth the responsibility of absorbing all our education and feel that in later years our knowledge will continue to grow without additional nourishment. The word "education" is derived from the Latin meaning "to lead out." It is by leading out the mind into new, various, and interesting paths that one may hope really to achieve the finer things in living.

THE president of another of our leading colleges last June, in addressing the Senior Class at Commencement time, warned them of the great temptation of settling into mediocrity when they left the college walls and returned to the community to take up practical living. The course leading to mediocrity is so easy, and by contrast the path to higher achievement so difficult, that only by sheer determination and persistent effort can one hope to arrive at the higher level and by working with his associates raise the entire level of his community. After all, the short period of our formal education rapidly passes; it can teach us no more than the methods of education and imbed within us the spark of educational ambition. Let us as chemists nurture that spark to a warmth and a glow and avoid the pitfall of mediocrity.

Looking Ahead

(*Continued from page 298*)

mental in shaping the course of future developments by applying his thought and energy in the most effective manner. His expert knowledge will be sought only to the extent that his advice proves effective. The soundness of his advice will depend upon his ability to cultivate the habit of looking ahead to recognize oncoming events before they are obvious to all. This is vision. To see what others cannot see; to interpret wisely and persuasively one's observations for the benefit of society are the essential prerequisites for leadership.

Trends in the Petroleum Industry

A meeting of the New York Chapter of The American Institute of Chemists will be held at The Chemists' Club, 52 East 41st Street, New York, N. Y., on October 25th at 8 P. M. The speaker will be Dr. Benjamin T. Brooks, F.A.I.C., Consulting Chemist, who will discuss, "Trends in the Petroleum Industry."

Educational Requirements for Secondary School Teaching

A symposium conducted by the Niagara Chapter at its 11th regular meeting, May 3, 1935.

THE Chairman, Arthur J. Norton, and the Chairman of the Committee on Professional Education, William R. Sheridan, led off with a few remarks outlining the purposes of the discussion, presenting the situation as it now exists in several local school systems and as it now exists in a few of the higher institutions of learning, after which the several speakers were introduced in order.

A short report was presented by Howard W. Post on the status of the special committee appointed by the American Chemical Society to investigate the situation relative to teachers of science in secondary schools. The committee, on the authority of the Secretary of the A.C.S., has not yet come to an agreement and has asked to be continued.

Groves H. Cartledge presented the point of view of the typical university which is trying to serve the times in more than the fields represented by the Arts College alone. These universities are faced with certain facts and these facts must be recognized. Formulation of policy is dependent on first, the number of graduates at present going into teaching. Normally 50%, this number has shrunk during years of depression until now it is nearer 25% for A.B. graduates of recognized Colleges of Arts and Science. For Ph.D's, the University of Chicago sends 90% of its graduates into teaching, but this includes all departments. Doubtless in chemistry the percentage is much lower. Nevertheless, the university must take these figures into consideration. Secondly, the enormous growth of rules, regulations, and laws governing secondary teaching must be taken into account. Opportunities for advancement in secondary teaching lie almost entirely in the administrative field work not necessarily connected vitally with the subject matter in which the teacher has specialized. Thirdly, the teacher may have to teach more than one subject, especially if he or she is employed in a smaller high school.

Two attitudes may be found among university faculties. The train-

ing of professional teachers may be viewed as a matter to be handled by a separate School of Education with a minimum of concentration in the major field; or each department may be required to have general charge over its own graduates who intend to teach in secondary schools, as in the case of the University of Chicago which recently abolished its School of Education, converting it into a department. At the University of Buffalo, Dean Cummings of the School of Education insists on a maximum number of hours in the major field. The net result over the country, however, is that departments give the most work in their own field which they can possibly fit into the schedule of a prospective teacher.

Dr. Alvin E. Shepard, former Assistant Superintendent of Schools of Buffalo, New York, spoke on the relation of science instruction to the primary schools. He expressed himself at the first as favoring the teaching of chemistry by one who understands chemistry. Then, should physics and chemistry be taught in the primary schools as such? In these schools there is the problem of teaching many subjects fitting the students for life; in fact, many persons believe that primary education should be so all-embracing as not to be taught by subjects at all. But there exists the necessity of teaching the child as he sees things. It is not practicable to present chemistry or physics as such; the child is not interested in theories and laws. He is, however, truly scientific with his eternal "Why?" and "How?" and "Then what happened?" He is interested in air, water, mechanics, simpler uses of electricity, etc., and these things can be worked into primary curricula without much difficulty.

Mr. Clyde P. Wells, Superintendent of Schools, Batavia, New York, presented the following paper on the subject:

I SUSPECT that you feel that by and large the secondary school chemistry instructor is inadequately prepared in his special field for teaching boys and girls in the upper high school levels. On this point I am quite in accord with you. Secondly, by implication at least, I am of the opinion that you have a feeling that courses in "education" are magnified as to importance in the certification of teachers to instruct successfully such an exact and pure science as chemistry. On this point I take counter issue with you.

I wonder if our minds meet as to what is the nature and the function of the present-day American high school. It is not the same institution

that you attended ten, fifteen, twenty or shall I say thirty years ago. At least thirty years ago applies to me as I view the picture. We have on good authority that in 1895 only about five per cent of all the boys and girls of high school age were in the secondary schools of this country. Five years later that percentage had doubled to ten per cent. In 1910, it had advanced to 20 per cent. In 1920, it was around 40 per cent. In 1930, the ratio had advanced to 55 per cent and it is estimated that this year, between 60 and 65 per cent of all the boys and all the girls of normal high school age are enrolled in the secondary schools in this country.

At this point I submit to you a graph of the rapid secondary school growth in New York State over a period of twenty years from 1915 to 1935. Graphic representations of this growth for the city of Batavia or Ithaca are almost duplicates of that for the State or for almost any other of the larger secondary school centers. It stands to reason therefore that the high school of 1895 had a more highly selected group of students who were nearly all of college caliber. It likewise follows that college entrance is not the primary function of the high school of today. The public high school of today is confronted with the necessity of serving as best it can the life-outlook interests and values of all the boys and all the girls.

Now, there has been in recent years a phenomenal public interest in the broad and changing field of science. That is attested to in current-literature articles, in radio programs, in the field of advertising, in the growing popularity of science magazines and magazines on things of a mechanical nature.

I contend that the teaching of science; yes, the teaching of chemistry in the high school of today to any boy or girl who has an interest in the subject but who is not of potential college caliber is justified as cultural or as a general information subject. I contend that one's life is richer and more enjoyable for having had the course in high school. We enjoy a piece of literature more if we understand the allusions to mythology or history or if we can translate the Greek or Latin or modern language phrases inserted therein. Likewise, we enjoy the scientific article far more if we have at least an exploratory knowledge of the field of general science or of a specific science.

I should hope that not all of the hundred and twenty in the chemistry classes of Batavia High School were going on to college. We in the larger high schools can and do homogeneously group our students in nearly every subject field into the college entrance group and into groups of other life-outlook fields.

NOW, I do not believe that a man with a maximum of training in a special field, who has a research type of mind that has an urge to delve into the unknown, can be a success in teaching high school students unless he shall have oriented himself to that peculiarly difficult task. I believe that he should have a knowledge of the more recent history of secondary education. I believe that he must have some knowledge of the philosophy, principles, and problems of secondary education. I believe that he must have a definite knowledge and sympathy toward adolescent development and that he must have the educational psychology and methodology to meet that development. I believe that he should supplement that knowledge of adolescence with definite observation and practice teaching in his special field. Otherwise, an impatience and lack of sympathy with youthful minds would invariably cause him to fail in his task.

If these beliefs are not true, then how can Harvard, Yale, Columbia, and Chicago and all the rest of them justify the great expense to maintain their schools of education?

I am pleased to report that there is a very definite movement in New York State to improve the subject matter foundation in every subject field. Effective as of September 1, 1936, minimum subject-matter standards have been set up by the Board of Regents. Teaching certificates thereafter will be wholly by subject fields with the additional requirements of education courses. The extension of certificates is contingent upon growth in service with re-certification after one five-year period and then each ten-year period thereafter.

Even as far removed from the classroom as I, a superintendent of schools, am, I frequently have brought to my attention students who, the principal or the department head tells me, have research types of minds. Those are the students that you college men ought to seek out in the high schools of your contributing area. Maybe you can develop a research attitude among students in college, perhaps we can in high school. I believe that that attitude is inborn and that the task of the secondary school and the college of today is to find that rare species and to encourage their creative and research interest instead of expecting that quality to be potential in every student.

I have enough faith in the great scheme of things to think that there is a place in the world for every type of person.

In summary, I have tried to suggest that heretofore the subject background of teachers of all subjects and of chemistry in particular has been inadequate; that minimum standards have recently been established which will have a tendency to approach maximum standards.

I have sought to show you that the present-day high school is not primarily a college entrance institution and that because of the wide range of student interest and ability it cannot be thus. I have tried to impress you with the fact that a sympathetic understanding of the philosophy and principles of secondary education coupled with a patient sympathetic understanding of adolescence is necessary to success in teaching high school students. In order to get this attitude "education" courses coupled with observation and practice teaching are with rare exception necessary and that maximum knowledge in a subject field cannot substitute therefor. In other words, the recently adopted New York State Secondary School Teacher Certification Regulations bid fair to greatly improve instruction in future years.

CARL RASCH expressed the point of view of the industrial chemist by saying that in times to come there will be an increasing demand for well-trained men in the field of industrial chemistry, and, in fact, for well-trained men in every field. The industrial chemist knows that his men have passed high school examinations, Regents perhaps, but how much of this material have they retained? Their teachers are encouraged to go back to college and study after graduation, to earn credits, to add an increment to their salary. A few Ph.D.'s in the modern high school in science departments would give those departments a closer tie to the industries, would give the students more of an insight into what might lie ahead of them if they choose a career as what is often termed a "laboratory boy;" and it might result in the creation of desires on the part of teachers in other departments to work for Ph.D.'s as well. It would also give the Ph.D. a broader point of view.

Arthur W. Burwell and others summarizing these remarks brought out the point that after all is said and done, if an organization such as the AMERICAN INSTITUTE OF CHEMISTS could set itself up in sufficient strength it could make membership in its organization the equivalent to a license or similar stamp of approval and thereby certify to the worth of a man who calls himself a chemist whether he be high school teacher, college professor, or industrial chemist.

Articles, news items, chapter reports, or other material intended for publication in THE CHEMIST should be sent to reach the Editor not later than the 25th of the month preceding the issue.

August Merz, F.A.I.C.

By Elvin H. Killheffer

A biography of the vice-president of Calco Chemical Company: his early education and future success.

AUGUST MERZ was born in New York City, November 1, 1873, one of the sons of Henry Merz, who with Frederick Heller, founded the Heller and Merz Company. He attended the New York City public schools and then the College of the City of New York to the end of the junior year.

It is indeed likely that parental influence was pretty strong in advising and perhaps also directly influencing the course of education which subsequently followed. To appreciate this fact we have only to remember that Henry Merz, the Father, had embarked on a chemical manufacturing business without any particular training in that direction. He was, therefore, in a position to appreciate the value of such education and the usefulness of it in his own company.

We find then that August went from the College of the City of New York to Cornell, where he received his B.S. in 1893, and then spent the following two years there in graduate study under Dennis, Orndorff, and Nichols.

Then followed the polishing off abroad, three semesters in chemistry at Heidelberg, Germany, under Meyer, Gattermann, Jannasch, and Heinrich Goldschmidt, and one semester at Mulhouse under Nolting on dye chemistry.

August Merz was apparently well grounded in diplomacy even in those comparatively tender years, for we look in vain for the "honor scars" reminiscent of Heidelberg. Returning home he entered his father's company in October, 1897, as assistant chemist, advancing later to chief chemist and plant superintendent and then to director and secretary of the company.

On April 26, 1899, he married Florence V. Doyle of Ithaca, New York, by whom he has four children, two daughters and two sons, one of the latter deceased in infancy.

By his friends and associates Mr. Merz is thought of as a rather pronounced conservative and it is this writer's guess that it was this ingrained conservatism that prevented the Heller and Merz Company

from rapidly taking a leading position in the development of the American dye industry during the great war. Several years ago Mr. Merz, in an interview with Williams Haynes, discussed this very subject and advanced several explanations. Without venturing any opinion as to the wisdom or otherwise of the course then followed, it is interesting, nevertheless, to contemplate what the original founders of the Heller and Merz Company would have done under the same circumstances, having in mind the way in which they tackled and solved the production of ultramarine about which neither of them had any previous knowledge.

WHEN the Heller and Merz Company was purchased by American Cyanamid Company, it was combined with and made a part of Calco Chemical Company of Bound Brook, N. J., and Mr. Merz was made a vice-president of Calco Chemical Company, which position he now occupies with headquarters at Bound Brook.

The qualities of conservative thinking, coupled with the reputation for sterling honesty, have naturally led to the selection of Mr. Merz for a number of important posts among which might be mentioned his membership on the Advisory Committee on Dyes for both the War Trade Board and the Textile Alliance.

Undoubtedly also these traits of character were controlling factors in his selection as president of Synthetic Organic Chemical Manufacturers Association when its type of organization was changed in 1926. Before then he had been chairman of the Dyes Section of the Association and chairman of the Board of Governors. In 1926 it became necessary for financial reasons to change the character of the official set up in the S.O.C.M.A. The Association had until then a paid president and secretary and the new plan called for only a paid secretary, with a president elected from the membership. In these circumstances, it was necessary to select very wisely for the continued success of the Association. The requirements of the office were made to order for Mr. Merz. He was a man in whom the membership had confidence and he was conservative in his views. He was diplomatic in his handling of situations as they arose and was very well liked personally. The result has been that Mr. Merz has been re-elected each year as the Association president, which office he still holds.

Outside of his regular business connections, Mr. Merz has many other interests, some of which are listed for the benefit of the reader, who can from this information draw some further insight into the character of

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BOOKS

PHYSICAL CHEMISTRY. BY A. J. MEE. THE IDEAS OF PHYSICAL CHEMISTRY. BY H. & H. A. C. MCKAY. *Heinemann*, 1934.

PHYSICAL chemists, in this country particularly, maintain that it is impossible to avail oneself of the modern developments in this subject without extensive use of higher mathematics. The two volumes at hand are excellent evidence to the contrary. "The Ideas of Physical Chemistry" by McKay is a popular treatise, while "Physical Chemistry" by Mee is intended as a textbook for higher schools and University degrees.

As a textbook, the book by Mee is quite reasonably complete and has succeeded admirably in explaining the ideas of physical chemistry descriptively, so that any student who is thoroughly familiar with it will be enabled actually to use its contents as parts of his thought processes, an object which is too often defeated by our American insistence on higher mathematics.

While the McKay book is somewhat more popular, it also contains an excellently written description of most of the ideas of current physical chemistry. It also contains a short bibliography for specialists.

The reviewer feels that both of these books will probably be of more service to the average chemist in this country than any of our mathematical treatises on the same subject. K. M. H.

A SHORT MANUAL OF SYSTEMATIC QUALITATIVE ANALYSIS BY MEANS OF MODERN DROP REACTIONS. BY DR. C. J. VAN NIEUWENBURG AND DR. G. DULFER. *D. B. Centen's Uitg. Maatschappij (N. V.)*, Amsterdam, 1935. 2nd Edition.

WE HAVE previously noted the first edition of this textbook. The second edition contains a few new reactions and re-introduces the Ammonium Carbonate Method for the separation of the alkaline earths.

That a new edition has been needed within two years is not so much evidence of the great progress in microchemistry, of which we are constantly made aware on all sides, as it is of the success of the scheme herein outlined, both as a system of qualitative analysis and as a system which can be taught to college students. There seems to be no doubt that, at least as far as qualitative analysis is concerned, any institution of collegiate standing which does not give its students a course in micro-

chemical methods is failing in its duty. As we stated of the first edition of this book, it is evidently a good text for students and should prove a very valuable reference to any chemist in regular practice who has occasion to resort to qualitative analysis. K. M. H.

THE STAINLESS PRINCE OF STEELS. Published by *The Chemical Foundation, Inc.* New York, N. Y.

"A glittering newcomer has emerged from the steel industry to tilt its lance at steel's oldest enemy—rust." Thus begins a popular and very readable account of the rapid industrial growth of stainless steel from 1929, when it was an industrial curiosity, to 1935, when it is used by almost all industries. To many of these industries, notably automobile manufacturing, oil industry, nitrogen extraction from air, production of dyes, food industry, and transportation, stainless steel is now regarded as indispensable because of its lightness, strength, resistance to corrosion and rust. Typographically excellent, the pamphlet contains full-page photographs of such artifacts of stainless steel as the First Zephyr, tower and entrance of the Chrysler Building, Radio City Music Hall, Empire State Building, dye machines, cafeteria counters, safe deposit boxes, fluted columns, machine parts, etc. An appendix contains a list of the licensees of The Chemical Foundation, Inc., under Strauss Patents Numbers 1,316,817 and 1,339,378.

V. F. K.

Back Numbers of The Chemist

A few copies of the following issues of THE CHEMIST are now available. Two or three articles chosen at random from each issue are listed to assist those interested in particular subjects to obtain a valuable reference. These few remaining copies of THE CHEMIST may be obtained for 15 cents each as long as they last Remittance in stamps or coins should be sent to THE CHEMIST, 233 Broadway, New York, N. Y.

January, 1932

The Chemist, Creator of Wealth	By F. H. Bivins
Eastman Chemical Research	By Walter Clark
Vivid Technical Reports	By Edward Thomas

February, 1932

New Paths in Chemistry	By Chandler D. Ingersoll
Organic Research	By J. N. Taylor
Charles H. Herty—Apostle to the South	By Florence E. Wall

March, 1932

Business Risks	By D. P. Morgan
The Applicant for a Patent	By C. W. Rivise
New Research Product	By B. G. Klugh

April, 1932

Rewards of the Medical Chemist	By John M. Ort
What the Engineers Have Done	By J. P. H. Perry
Eliminating the Guesswork	By J. B. Rather

May, 1932

Department Store Chemist	By E. Freedman
Fees for Chemical Services	By W. C. Dumas

August Merz, F.A.I.C.

(*Continued from page 309*)

the man: director of Ironbound Trust Co., Newark, N. J., and member of Advisory Committee when latter became a branch of the Fidelity-Union Trust Company; trustee of Homeopathic Hospital of Essex County, N. J., of Newark Eye & Ear Infirmary, New Jersey College of Pharmacy, and on Advisory Board after merger of latter with Rutgers University.

Mr. Merz is a member of Sigma Xi, the American Chemical Society, AMERICAN INSTITUTE of CHEMISTS, German Chemical Society. He was president of New Jersey Chemical Society and later chairman of North Jersey Section of American Chemical Society.

His clubs are: Cornell, Phi Gamma Delta, Chemists', Newark Athletic, Rockaway River Country, and Racquet, Washington, D. C.

August Merz lives in East Orange, N. J., and in the summer at Denville, N. J. He is fond of tennis, plays some golf, and is much interested in taking and showing movies of his friends in action.

INSTITUTE NOTES

OFFICERS

M. L. CROSSLEY, *President*
Calco Chemical Co.
Bound Book, N. J.

ARTHUR J. HILL, *Vice-President*

HOWARD S. NEIMAN, *Secretary*
233 Broadway
New York, N. Y.

ALAN PORTER LEE, *Treasurer*

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1936	1937	1938
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CHAPTER REPRESENTATIVES

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National Council

September Meeting

The one-hundred and twenty-fourth meeting of the Council of THE AMERICAN INSTITUTE OF CHEMISTS was held at The Chemists' Club, 52 East 41st Street, New York, N. Y., on September 19, 1935, at 6:30 P. M.

Dr. M. L. Crossley presided.

The following councilors and officers were present: Messrs. R. A. Baker, F. G. Breyer, H. T. Clarke, M. L. Crossley, A. P. Lee, H. S. Neiman, W. T. Read, L. Van Doren, F. W. Zons, and Miss F. E. Wall. Miss V. F. Kimball was also present.

The minutes of the previous meeting were approved. The Treasurer's report showing a cash balance of $899.11 was read and accepted. The Secretary reported for the Committee on THE CHEMIST to the effect that Miss Kimball be given the editorship of the CHEMIST. On motion made and seconded, the recommendations of this Committee were adopted.

The Secretary reported that on August 23, 1935, the Institute wrote to the Works Progress Administration suggesting relief projects for unemployed chemists, that the Administration approved four of these suggestions: air pollution, sewage disposal, water supply, and road materials, and asked for working procedures on these projects. Upon motion made and seconded, it was decided to refer each one of these projects to a committee conversant with the subject, and to ask them to draw up working procedures for presentation to the Works Progress Administration, or to make recommendations.

The Secretary read a letter from the Niagara Chapter inviting the Institute to hold its next annual meeting in Buffalo. A motion was made that the Institute accept the invitation. The

motion was amended to go on record as approving the idea of having the meeting in Buffalo, but to appoint a committee consisting of the President and Secretary who will report definitely two months from now. The amendment to the motion was approved. The amended motion was then carried.

The Secretary read a letter from Charles Post requesting information about scholarship assistance, and the Secretary was requested to refer the letter to Dr. Crossley.

The Secretary reported that the Institute had protested the omission of chemists as a group capable of rendering scientific opinion as set forth in the Copeland Bill, S-5, relating to the Food and Drug Act. The Secretary was requested to write the Committee holding hearings on this bill to the effect that "chemists" should be included without restriction to "biological chemists" or "physiological chemists," as had been proposed by the administrator. Mr. Breyer promised to present the matter to the Association of Consulting Chemists and Chemical Engineers.

Dr. Zons reported for the Committee on Budget, and reminded the Council that the decrease in dues would have to be made up by an increase in the membership, in order to enable the Institute to continue its activities. The report of the Budget Committee was accepted.

Dr. Read reported the activities of the Committee on Membership and was requested to meet with the Secretary and prepare follow up letters to replies received by the Committee.

Upon motion made and seconded, the third Thursday of each month was selected for Council meetings for the current season.

Upon motion made and seconded, the President was requested to appoint a committee to arrange for Institute representation at the 15th Exposition of Chemical Industries to be held at Grand Central Palace, New York, N. Y., in December, 1935.

The following members were elected:

FELLOWS

CHESTER A. AMICK, *Research Chemist*, Calco Chemical Company, Bound Brook, N. J.

GEORGE RUSSELL BANCROFT, *Professor of Physiological Chemistry and Toxicology*, Jefferson Medical College, Philadelphia, Penna.

ERNST BERL, *Research Professor of Chemistry*, Carnegie Institute of Technology, Pittsburgh, Penna.

JOHN E. CAVELTI, *Associate Professor of Chemistry*, Wesleyan University, Middletown, Conn.

EMMETT B. CARMICHAEL, *Professor, Head of Department of Physiological Chemistry*, University of Alabama, University, Ala.

HENRY N. A. DEPHILLIPS, *President*, Coating Materials Laboratories, Inc., Brooklyn, N. Y.

JUSTUS H. DOERING, *Chemist*, Firestone Tire and Rubber Company, Akron, Ohio.

WILLIAM H. GARDNER, *Research Professor*, Polytechnic Institute of Brooklyn, Brooklyn, N. Y.

CLAUDE GORTATOWSKY, *Assistant to Vice-president in charge Chemical Control*, Coca-Cola Company, Baltimore, Md.

IRVING WALTER GREENBERG, *Consulting Research Chemist*, American Aniline Products, Inc., New York, N. Y.

HAROLD W. GREENUP, *Research Chemist*, Firestone Tire and Rubber Company, Akron, Ohio

RAYMOND F. DUNBROOK, *Head Organic Division*, Firestone Tire and Rubber Company, Akron, Ohio.

MERLE L. GRIFFIN, *Senior Chemist*, Shell Petroleum Corporation, Wood River, Ill.

WILLIAM H. HILL, *Chemist*, American

Cyanamid Corporation, New York, N. Y.

ROBERT E. HORSEY, *Chief Chemist*, Mabrand Products, Inc., Long Island City, N. Y.

BINGHAM J. HUMPHREY, *Research Chemist*, Firestone Tire and Rubber Company, Akron, Ohio.

PAUL P. MCCLELLAN, *Research Chemist*, Firestone Tire and Rubber Company, Akron, Ohio.

CHARLES E. MORGAN, *Chief Chemist, Toxicologist*, N. Y. State Racing Commission, New York, N. Y.

CHARLES PALEY, *Chemist*, Certified Laboratories, Inc., New York, N. Y.

RAYMOND A. PINGREE, *Chemist*, U. S. Finishing Company, Providence, R. I.

CHARLES M. SCHOEPPLER, JR., *Head Science Dept.*, Collegiate School, New York, N. Y.

JOHN N. STREET, *Research Chemist*, Firestone Tire and Rubber Company, Akron, Ohio.

ELMER F. WAY, *Secretary - treasurer, Technical Director*, The Durfee Company, Grand Rapids, Mich.

WILLIAM B. WIEGAND, *Research Director*, Binney and Smith Company, New York, N. Y.

ASSOCIATE

CLINTON M. DOEDE, *Research Chemist*, Firestone Tire and Rubber Company, Akron, Ohio.

JUNIORS

DONALD C. BUNTING, *Assistant in Laboratory*, Johns Manville Corporation, Manville, N. J.

ARTHUR PHILIP DEMARCO, 700 North 40th Street, Philadelphia, Penna.

JOHN W. HEISLER, *Analyst*, Continental Distilling Corporation, Philadelphia, Penna.

STUDENTS

HENRY L. LINDER, *Laboratory Assistant*, Monsanto Chemical Company, Monsanto, Ill.

MITCHELL A. SIEMINSKI, *Research Assistant in Textile Microscopy and Senior in Chemistry*, Massachusetts Institute of Technology, Cambridge, Mass.

The following members were raised from the rank of Associate to that of Fellow:

FREDERIC H. ADAMS, *Research Assistant*, Calco Chemical Company, Bound Brook, N. J.

JAMES A. CAMELFORD, *Chemist*, Alox Chemical Corporation, Niagara Falls, N. Y.

WENDELL P. MUNRO, *Research Chemist*, Calco Chemical Company, Bound Brook, N. J.

There being no further business, adjournment was taken.

Dates of Council Meetings 1935–1936

Meetings of the National Council of THE AMERICAN INSTITUTE OF CHEMISTS will be held on the following dates:

September 19, 1935	February 20, 1936
October 17, 1935	March 19, 1936
November 21, 1935	April 16, 1936
December 19, 1935	May (date to be announced later)
January 16, 1936	June 18, 1936

Niagara Chapter

A meeting of the Niagara Chapter of the Institute was held on August 24, 1935, at the summer home of Dr. A. W. Burwell. The meeting was called to order by Chairman C. F. Smith.

The Chairman asked for suggestions for the guidance of the Grosvenor Library Committee. It was suggested by Mr. Norton that the index of publications available at various plants be brought up to date unless this has been done. Further suggestions are to be submitted directly to Dr. William R. Sheridan.

The Chairman asked for discussion of a proposed invitation to the national organization to hold their 1936 meeting in Buffalo. Mr. Norton stated the belief that there should be attention focussed on the development of definite policies for the Institute. Dr. Burwell moved that an invitation be extended by the Niagara Chapter to the Institute to hold its annual meeting in Buffalo during the latter part of May or early in June of 1936. The motion was carried.

The Chairman appointed the following as a steering or advisory committee to make general plans for the National meeting: A. J. Norton, *Chairman*, F. L. Koethen, A. W. Burwell.

Mr. Norton moved that Dr. Burwell be instructed to use his influence to have the national organization adopt the policy used here for attracting chemists of the proper type to become members of the Institute.

Dr. Haas was then introduced as a guest and assured of his welcome.

The Chairman asked for expressions of opinion as to whether membership in the American Chemical Society should be required as a prerequisite to membership in the Institute. Mr. Norton moved that the Chapter Representative be instructed to recommend such requirement to the national organization. The motion was carried.

The report of the Treasurer was presented and approved, and the meeting adjourned.

Emblem of The American Institute of Chemists

Please send to the Committee on Insignia detailed suggestions for the use of this emblem by the Institute.

Our New Members

CHESTER ALBERT AMICK, F.A.I.C., holds the degrees of A.B. and A.M., from Indiana University, has studied at Cornell, and at the University of Lyons, France. His specializations are cellulose chemistry, textile microscopy, urea-formaldehyde resins and their applications to fabrics, textile printing, carbohydrate and colloid chemistry. He has written many papers on these subjects. He is employed by the Calco Chemical Company.

GEORGE RUSSELL BANCROFT, F.A.I.C., received an A.B. in classical subjects from Acadia University, Nova Scotia, a scientific degree from Yale University, and also a Ph.D. degree from Yale. He has studied at Chicago University, at Dalhousie University, and at Yale School of Medicine. A professor of physiological chemistry and toxicology at Jefferson Medical College, Dr. Bancroft has written several articles.

ERNST BERL, F.A.I.C., obtained a degree in chemical engineering from Technical University, Vienna, and a Ph.D. from the University of Zürich, Switzerland. His specializations are heavy inorganic chemicals, explosives, cellulose, rayon, films, foils, cellulose products, activated carbon, flotation, boiler water, fuels and combustion, ceramic materials. He has more than 200 publications to his credit, including "Chemisch - technische Untersuchungsmethoden" "Chemische Ingenieur - Technik," "Liebigs Briefe;" and "Liebig und die Salzaurefabrik zu Salzhausen." He is a research professor of chemistry at Carnegie Institute of Technology.

DONALD CHARLES BUNTING, J.A.I.C., has the degree of A.B. (chemistry major) from Dartmouth College. He is a laboratory assistant in the Filtration Division of the Research Laboratories of Johns Manville Corporation.

EMMETT BRYAN CARMICHAEL, F.A.I.C., has studied at Central College, University of Colorado (B.A. and M.S. degrees), and the University of Cincinnati from which he received a Ph.D. He was also graduated from the U. S. Technological School for Inspectors, Chemists, and Linemen. His specialty is physiological chemistry, on which he has written a Laboratory Manual, in addition to twenty articles published in various journals. He is a professor and head of the Department of Physiological Chemistry at the University of Alabama.

JOHN ELMER CAVELTI, F.A.I.C., holds B.S. and M.S. degrees from Wesleyan University and a Ph.D. from Yale. His specialization is physical chemistry, and particularly rates of reaction. He is an associate professor of chemistry at Wesleyan University in charge of analytical and physical courses.

ARTHUR PHILIP DEMARCO, J.A.I.C., obtained a degree of B.S. in chemistry from Carnegie Institute of Technology in 1933. He is at present unemployed.

HENRY N. A. DEPHILLIPS, F.A.I.C., received a B.S. degree from the College of the City of New York and an M.A. degree from Columbia. He specializes in the chemistry of nitrocellulose, lacquer, synthetics, paints, and varnishes, and holds several patents in this field. He is president and technical director of Coating Materials Laboratories, Inc., Brooklyn, N. Y.

CLINTON MILFORD DOEDE, A.A.I.C., studied at Crane, Jr., College, and received B.S. and Ph.D. degrees from the University of Chicago. He specializes in the chemistry and physics of interfaces and has published an article concerning apparatus for the separation of isotopes of hydrogen by electrolysis. He is a research chemist for the Firestone Tire and Rubber Company, Akron, Ohio.

JUSTUS HARVEY DOERING, F.A.I.C., holds a degree from the University of Pennsylvania. A specialist in rubber technology, he has written several articles on the subject. He is employed by the Firestone Tire and Rubber Company, Akron, Ohio, as a chemist.

RAYMOND F. DUNBROOK, F.A.I.C., received a B.S. in Chemical Engineering from the University of Michigan, and M.S. and Ph.D. degrees from the University of Pittsburgh. Specializing in dyestuff chemistry, rubber chemistry, and organic chemistry, he has had a number of articles published. He is head of the Organic Division of Firestone Tire and Rubber Company.

WILLIAM HOWLETT GARDNER, F.A.I.C., graduated from Cornell, took an M.S. degree from Dartmouth and returned to Cornell for his Ph.D. An authority on shellac, paint, varnish, and pigment chemistry, plastics and lacquer, Dr. Gardner has written about 35 articles for publication. He is a research professor at Polytechnic Institute of Brooklyn, N. Y.

CLAUDE GORTATOWSKY, F.A.I.C., has a B.S. degree from Princeton University and has studied at the University of Virginia, and at Princeton Graduate College. Specializing in the soft drink industry, he is assistant to the vice-president in charge of chemical control at the Coca-Cola Company's plant at Baltimore.

IRVING WALTER GREENBERG, F.A.I.C., received the degrees of B.S. and Ch.E. from New York University and A.M. and Ph.D. from Columbia. Specializing in drugs, perfumes, dyestuffs, his researches in collaboration with Dr. M. T. Bogert have been published. He is a consulting research chemist for American Aniline Products, Inc., New York, N. Y.

HAROLD WILSON GREENUP, F.A.I.C., holds a B.A. degree from Austin College and an M.S. degree from Massachusetts Institute of Technology. His specializations are colloid chemistry and the chemistry of latex on which he has published several articles. He is employed by Firestone Tire and Rubber Company as a research chemist.

MERLE L. GRIFFIN, F.A.I.C., received the degrees of B.S. and M.S. from Washington University, St. Louis, Missouri. He specializes in petroleum chemistry, particularly lubricating oils and greases, and is senior chemist of the Shell Petroleum Corporation, Wood River, Illinois.

JOHN W. HEISLER, J.A.I.C., graduated from the Philadelphia College of Pharmacy and Science with a B.Sc. degree in 1934. He is employed as analyst by the Continental Distilling Corporation, Philadelphia, Penna.

WILLIAM HERMANN HILL, F.A.I.C., has studied at the University of Leipzig, University of Cologne, University of Pittsburgh, and holds a Ph.D. degree from the Universities of Bonn and Münster. Specializing in the chemistry

of coal, coke, gas, tar, synthetic resins, he holds many patents in these fields. He is a chemist with American Cyanamid Company, New York, N. Y.

ROBERT EDGAR HORSEY, F.A.I.C., holds a degree from the Case School of Applied Science. After a number of years of experience with industrial corporations, he is now employed as chief chemist of Mabrand Products, Inc., Long Island City, N. Y.

BINGHAM J. HUMPHREY, F.A.I.C., received a B.S. degree from the University of Vermont, and a Ph.D. from Yale. Specializing in general organic chemistry, he is employed as a research chemist with Firestone Tire and Rubber Company, Akron, Ohio.

HENRY LEO LINDER, S.A.I.C., has studied at the University of Cincinnati and is at present taking work in night school at Washington University. He is employed as a laboratory assistant at the Monsanto Chemical Company, Monsanto, Illinois.

PAUL P. MCCLELLAN, F.A.I.C., holds a B.S. degree in chemical engineering from the University of Dayton, and a Ph.D. degree from Cornell. Specializing in microscopy, spectroscopy, organic chemistry, he is a research chemist with Firestone Tire and Rubber Company, Akron, Ohio.

CHARLES EDGAR MORGAN, F.A.I.C., studied at Lenoir College, N. C., and has a degree from the University of Florida. He specializes in food and drug analysis, toxicology, and the detection of drugs used illegally in connection with horse racing. He is employed as a toxicologist by the New York State Racing Commission, New York, N. Y.

CHARLES PALEY, F.A.I.C., received a B.S. degree from Columbia, an LL.B. degree from St. Johns's College Law School, and has studied at Brooklyn Polytechnic Institute, Cornell University Medical School, and Cornell's Post Graduate School and Hospital. Specializing in the chemistry of dairy products and foods, he has published several articles and reports. He is a chemist with the Certified Laboratories, Inc., New York, N. Y.

RAYMOND A. PINGREE, F.A.I.C., graduated from Pratt Institute. Specializing in sulfonation and modification of oils, fats, and waxes for use in the dyeing, bleaching, and finishing of rayon, acetate silk, linen and cotton fabrics, he has presented a paper before the American Oil Chemists Society. He is a chemist with the United States Finishing Company, Providence, R. I.

CHARLES M. SCHOEPPLER, JR., F.A.I.C., graduated from Pratt Institute and has an M.S. degree from Polytechnic Institute of Brooklyn. After several years of teaching experience, he is at present head of the Science Department of Collegiate School, New York, N. Y.

MITCHELL ANDREW SIEMINSKI, S.A.I.C., is a senior in chemistry at Massachusetts Institute of Technology, where he is also acting as research assistant in textile microscopy.

JOHN N. STREET, F.A.I.C., holds A.B. and M.S. degrees from Syracuse University, and a Ph.D. from the University of Wisconsin. He has also studied at State University of Iowa.

Specializing in rubber chemistry, he has collaborated on a number of publications, and is now a research chemist with Firestone Tire and Rubber Company, Akron, Ohio.

ELMER FRANCIS WAY, F.A.I.C., has B.Sc. and Ch.E. degrees from Michigan State University. He has also done extra work in bacteriology and organic chemistry at the summer school of that University. An authority on embalming and restorative art materials, technique and manufacture of embalming fluid and embalming chemicals, he has published a number of articles. He is secretary-treasurer and technical director of The Durfee Company, Grand Rapids, Michigan.

WILLIAM BRYAN WIEGAND, F.A.I.C., received two degrees from the University of Toronto. He specializes in rubber technology and carbon black technology, and has more than 50 publications to his credit. He is at present research director of Binney and Smith Company, New York, N. Y.

Applications for Membership

FELLOWS

FRANK JULIAN ANDRESS, *Professor of Biochemistry and Preventive Medicine*, Eclectic College of Medicine, Cincinnati, Ohio.

ALVIN PERCY BLACK, *Professor of Agricultural Chemistry*, University of Florida, Gainesville, Florida.

KIRK T. HOLLEY, *Chemist*, Georgia Experiment Station, Experiment, Georgia.

FRANCIS GREENBERRY METRO, *Technical Engineer* (*Chemistry*), The Porter Chemical Company, Hagerstown, Md.

CASH BLAIR POLLARD, *Associate Professor of Chemistry*, University of Florida, Gainesville, Florida.

RALPH CHARLES WILBUR, *Refinery Chemist*, Shell Petroleum Corp., Wood River, Ill.

ASSOCIATES

ROBERT CUTHBERTSON SWAIN, *Research Chemist*, American Cyanamid Company, Tremley Laboratory, Box 157, Linden, N. J.

JUNIORS

LEO HOMER CROSSON, *Chemist*, S. C. Surface Waters Project, Clemson, S. C., Box 57.

LUCY TERESA PORCELLI, *Technician*, Swedish Hospital, 128 Rogers Ave., Brooklyn, N. Y.

Professor Warren K. Lewis, of Massachusetts Institute of Technology, spoke on "Gel Structure and the Mechanism of Gelation," before a meeting of the North Jersey Section of the American Chemical Society, held at Elizabeth, N. J., on October 14th.

Dr. Saul Dushman, Assistant Director, Research Laboratories, General Electric Company, addressed the members of the New York Section of the American Chemical Society, at a meeting on October 11th. Dr. Dushman's topic was "New Concepts of Valence."

NEWS

The American Society of Refrigerating Engineers is sponsoring a debate, "Should Engineering Be a Closed Profession?" to be given during the 31st Annual Meeting of the Refrigerating Engineers, Pennsylvania Hotel, New York, N. Y., on December 4th. The debate contestants will be teams chosen by competition now under way at the Polytechnic Institute of Brooklyn and the Stevens Institute of Technology.

The American Institute of the City of New York announces the following programs: *October 23rd*, President's Dinner, Town Hall Club, New York, N. Y., Subject: "A Right in a Magic World of Color." Speaker: Herbert Thompson Strong, Color Expert. *October 29th*, American Museum of Natural History, New York, N. Y., 8:45 P. M. Round Table: "Man-Made Heavens—the New Hayden Planetarium." Leaders: Mr. Alfred Knight, President, The American Institute; Dr. Clyde Fisher, Curator, Department of Astronomy, American Museum of Natural History. *November 12th*, Institute Meeting Room, New York, N. Y., 8 P. M. Round Table: "The Formation and Structure of Cellulose Membranes." Leaders: Dr. William Crocker, Director, Boyce Thompson Institute for Plant Research; Mrs. Wanda K. Farr, Associate Cotton Technologist, U. S. Department of Agriculture; Dr. Sophia H. Eckerson, Microchemist, Boyce Thompson Institute for Plant Research. *November 14th*, Auditorium, American Museum of Natural History, New York, N. Y., 8 P. M. Program to be announced later. *November 19th*, Round Table, Metal Products Auditorium, International Building, Rockefeller Center, New York, N. Y., 8 P. M. Topic: "Science in Crime Detection." Leaders: Mr. H. T. Newcomb, formerly vice-president and general counsel, Delaware and Hudson Railroad Corporation; Mr. H. H. Clegg, Assistant Director, Federal Bureau of Investigation, U. S. Department of Justice.

The Osaka Commercial Museum, Osaka, Japan, a government institution, announces a "North American Exhibition" during March and April, 1936, at which will be shown the trades, industries, products, of Canada and the United States, with the purpose of encouraging trade relations between Japan and those countries.

Hellige, Inc., announces that its offices and factory are now located at 3702 Northern Boulevard, Long Island City, N. Y.

The United States Bureau of Mines announces the publication of "Minerals Yearbook 1935," containing complete information on current developments in the mineral industry, which may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at a price of $2.00.

The Bureau of Foreign and Domestic Commerce announces that "World Economic Review, 1934" may be obtained from the Superintendent of Documents, Washington, D. C., at 30 cents per copy. It presents outstanding economic developments of 1934 with a view to showing the significant trends throughout

the world, and contains 31 charts and numerous statistical tables.

The Annual Meeting of the National Paint, Varnish, and Lacquer Association will be held at the Mayflower Hotel, Washington, D. C., October 30th to November first.

Carl Iddings, F.A.I.C., formerly with the Muralo Company of Staten Island, N. Y., is now associated with the Casein Manufacturing Company of America, Inc., Bainbridge, N. Y.

The ninth Fall meeting of the American Oil Chemists Society will be held October 17th and 18th at Cincinnati, Ohio.

WILLIAM T. READ, F.A.I.C., is the new chairman of the North Jersey Section of the American Chemical Society.

WILLARD O. BREWER, F.A.I.C., has been placed in charge of the Pharmaceutical Manufacturing Division of Calco Chemical Company.

The Antiques Exposition, held at the Hotel Commodore, New York, N. Y., was opened October seventh with a testimonial dinner to Mr. and Mrs. Francis P. Garvan, who have presented their large collection of American antiques to Yale University.

The Sedgwick Memorial Medal of the American Public Health Association was awarded for distinguished service in public health to Dr. Haven Emerson of the College of Physicians, Columbia University, October 7th, at the Association's convention in Milwaukee.

D. D. JACKSON, F.A.I.C., will present the Chemical Industry Medal awarded to Edward R. Weidlein, F.A.I.C., director of the Mellon Institute of Industrial Research, at a meeting to be held November 8th. L. V. Redman, F.A.I.C., will speak on the accomplishments of the medalist.

SOME RECENT PUBLICATIONS BY MEMBERS

Industrial and Engineering Chemistry, October, 1935:

A. J. NORTON (with L. A. SONTAG), "Phenolic Resin Adhesive in the Plywood Industry."

News Edition of Industrial and Engineering Chemistry, September 10, 1935:

H. G. BYERS (with K. T. WILLIAMS), "Selenium in Deep Sea Deposits."

Journal of Chemical Education, September, 1935:

ALEXANDER SILVERMAN, "The Prerequisite and Collateral Value of Chemistry."

Industrial and Engineering Chemistry, September, 1935:

ROBERT SCHWARZ, "Brewing Processes."

NICHOLAS OPOLONICK, "Reduction of Nitrobenzene with Dextrose in Alkaline Solution."

GUSTAV EGLOFF (with HANS TROPSCH), "High-Temperature Pyrolysis of Gaseous Paraffin Hydrocarbons." Also (with V. N. IPATIEFF, and B. B. CORSON), "Polymerization, a New Source of Gasoline."

Textile Colorist, September, 1935:

CHARLES E. MULLIN (with ELIZABETH AUGHEY), "pH Indicators."

E. F. Houghton and Company, Philadelphia, Penna., commemorated the 70th anniversary of their founding by devoting the August-September issue of their publication "The Houghton Line" to a history of their progress from 1865 to the present.

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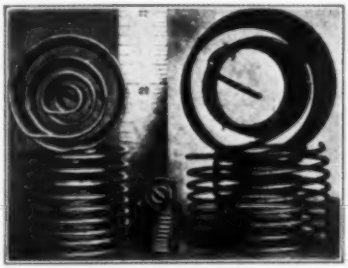

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